==========
Sequence Listing was accepted.
If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).
Reviewer: markspencer
Timestamp: [year=2009; month=8; day=6; hr=13; min=11; sec=30; ms=14;]
==========

Validated By CRFValidator v 1.0.3

Application No: 10507355 Version No: 2.0

Input Set:

Output Set:

Started: 2009-07-20 20:14:05.340
Finished: 2009-07-20 20:14:08.194
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 854 ms
Total Warnings: 20
Total Errors: 0
No. of SeqIDs Defined: 31
Actual SeqID Count: 31

Error code		Error Description
W	402	Undefined organism found in <213> in SEQ ID (4)
W	402	Undefined organism found in <213> in SEQ ID (7)
W	402	Undefined organism found in <213> in SEQ ID (14)
W	213	Artificial or Unknown found in <213> in SEQ ID (15)
W	213	Artificial or Unknown found in <213> in SEQ ID (16)
W	213	Artificial or Unknown found in <213> in SEQ ID (17)
W	213	Artificial or Unknown found in <213> in SEQ ID (18)
W	213	Artificial or Unknown found in <213> in SEQ ID (19)
W	213	Artificial or Unknown found in <213> in SEQ ID (20)
W	213	Artificial or Unknown found in <213> in SEQ ID (21)
W	213	Artificial or Unknown found in <213> in SEQ ID (22)
W	213	Artificial or Unknown found in <213> in SEQ ID (23)
W	213	Artificial or Unknown found in <213> in SEQ ID (24)
W	213	Artificial or Unknown found in <213> in SEQ ID (25)
W	213	Artificial or Unknown found in <213> in SEQ ID (26)
W	213	Artificial or Unknown found in <213> in SEQ ID (27)
W	213	Artificial or Unknown found in <213> in SEQ ID (28)
W	213	Artificial or Unknown found in <213> in SEQ ID (29)
W	213	Artificial or Unknown found in <213> in SEQ ID (30)
W	213	Artificial or Unknown found in <213> in SEQ ID (31)

SEQUENCE LISTING

<110> DLF-TRIFOLIUM A/S
RISOE NATIONAL LABORATORY
NIELSEN, Klaus K
JENSEN, Christian S
GAO, Caixa
SALCHERT, Klaus

<120> METHOD OF REPRESSING FLOWERING IN A PLANT

<130> 0147-0262PUS1

<140> 10507355
<141> 2005-06-09

<150> PCT/EP03/02629
<151> 2003-03-10

<150> US 60/363,125
<151> 2002-03-11

<160> 31

<170> PatentIn version 3.5

<210> 1
<211> 929
<212> DNA
<213> Lolium perenne

<400> 1
gcccaagcca cttcaaagct ttgctactac cagatagagc attcaccgtg caatatagaa 60

atacttgcct ctccaaccat gtctaggtct gtggagcctc ttattgttgg tcgtgtcatt 120

ggagaagttc tcgatccatt taacccatgt gtgaagatgg tagcaaccta taactcaaac 180

aagctggtct tcaatggtca tgagctctac ccatcagcag ttgtatctaa accaagagta 240

gaggttcagg ggggtgactt gcgatcctta ttcacattgg ttatgacgga cccagatgtg 300

ccaggaccaa gtgatccgta tctgcgggag catcttcact ggattgtcag taatatacct 360

gggacaacag atgcttcatt tgggggggag gtcatgagct atgagagccc aaagcccaac 420

attggaatcc acaggttcat ttttgtgctc ttcaagcaga agcgaaggca gactgtatct 480

gtgccttcct tcagggatca tttcaacacc cgccagtttg ctgtggataa tgatcttggc 540

ctccctgtgg ctgctgttta cttcaattgt cagagagaga ctgctgccag gaggcgctga 600

aaatcgagtt cttggctatc ccagttgtgc caaataaagg cttttggagt tatgcacctt 660

ctttctgaag tcaatgctcc tcttctacat tacttcctcg tggaccattg cttctttact 720

acagtttttg ctcagggatc aaataaatca agtgcatttt ggagattgta ttagattata 780

ttgtaagcag tgagatcagc aaccatgtgt taacataagc cagtacatta gcaggtccat 840

gtttatggtt tcatgttgtg tgtaagcagt tatcactaga aggaaggtca ggtagacaac 900

ccaaactggc aaaaaaaaag ctttatcta 929

<210> 2
<211> 5224
<212> DNA
<213> Lolium perenne

<400> 2
cactagtaac ggccgccagt gtgctggaat tcagggtaat acgactcact atagggmgct 60

cgaggatctt cccaccagtg tgcattcatg tgttacttac cactctccaa cttgagggac 120

tcaagattgg tgggcggctc cttttcgctg aagcgatcca aaggtgtcgg gtaacggtta 180

tgacagcaaa cagaaaacat cgccatctgc acggaagcca gaagtagtta ctatgtcaaa 240

gggatataaa aaactcacta atgaaggggg atgctattgc tgagataaac tgctatctca 300

tctacaggtg agattgcaag tatacttgac aacagggcca gatggtatgg catgaagaaa 360

attagggctg gagtagaaag gtaagatatg catggatttg gatgagatgg ctagagggtt 420

gcgagatatc aaatagaaga cacttcttca atgattcaat agaagatgca tgtgccatta 480

cagagtggat tattatgtcc tttttaaaga gatgcttacg tccctgacct ttcctataac 540

acaattacac tcctttgcta gacttttcct gctataattg tctttcctcg ccaaaagaat 600

aatactatag aacttcctaa tttaatttcc ccttattttc ttggactcta tcttaattct 660

cctcctattg ttcagccaag gactgctcct tccatttact tgcgccacgg gctgactgac 720

aatgacacct gcgcgctttg tgatcaagag cctgaatcta tttctcacct catgctgcaa 780

tgctccttct cacagcaaat atggtatgat atctgcagta agctcaacct tctgccatgt 840

atgccagttg gcaacgccga gttcagcatt tggttcgccg cagctgccgc caacgctcaa 900

ccagccctgc agaagggtgc taaatccatc atcatcctta ctctctggag attatggaag 960

acgaggaacg atgctatctt caaaaatctg gcccccaaca gactcgcctt agttcagtcg 1020

atcctagatg aagcctgtca atggtcgtta gccggtgcta aggcgctacg tcagttacct 1080

ttacatgcta gacccccctga tgttagcctt gatgaggaac tctaggtcta actaagttag 1140

ccctgtacag ttttttttttc tcttttcctt tttctttttt tgctttctct tcttttcgtt 1200

tttggtagct ttgctactct tgtatgctcc cgtcttctcg acggcttctt ctaatatata 1260

atgacgcatg ctttggcatg tgttcgagaa aaaaatttac ttacctctta ggctatattc 1320

tcttcaccaa cttggactcc acaaagcttc aatcgcaact tgtccaagct gctgccgctg 1380

gtgctgctgt ccttttccaa tgcatccata cactgtccta gtcagcatac caaacaaaaa 1440

agctaatgcc gcccctgttg tttcaaatga attatctgat tgtgatgctg ctaatctttt 1500

gcatatgagt ctcgggcata tgaatgaact tggtttggca gaatgaaaca agagaggact 1560

tcttgatgga tatagcactg gtaagctgaa gttctgtgag caggctatga tgttcccctg 1620

ttaaaaaaaa ggctatgaaa aacttgtgat aggtgttaag tattggtttt attttgcgtg 1680

caaattggta tgcatggaaa gttgtagtgc tactagtctg tggtgctact gtgctaccaa 1740

cacactgtag cactgccaaa aatttatgaa aaagtctgaa cagacgagat gtatctatca 1800

attcatggac ccattttgtt ataattttct tttaaaataa aaaattccgt aaagaatcaa 1860

taagtggaat tattggaaat gaaaaaagta accaaaatac taaacttttt ttcaaataca 1920

gatcggatat catggagaca cactggctac cattggttgg aatagctact agattccact 1980

acagctaggt gtcaagcaac tataatggca tcagaatgga gcagaaaaat gtcacaagct 2040

gtacttcact ccactacttc tagctgcaca aatgtcaagc aggcatgatt gcactagacc 2100

agaacatagt aatgcataaa gctgtaattg gctccactac ttatggaaac gaagaaatct 2160

attatttatt gttttaatcg agatgaagct gtgataattt tatcgctgaa atgacatttc 2220

agcactagac agcaccctag acaattaagt ggtggtggca ctgtattcca ttcctttatt 2280

ctcttccatg gtgtgttccc atagtactac aaagaagaga ataaacagat aataatggta 2340

atgcacttgg gtatcgaagt tttaggaaag attctaattc tagagcaatt gaactcaaca 2400

acaacttccc ttttccttaa cagaaaaaga atcggtcaaa cgaggcttgc ctaaaccaac 2460

aacactataa agacgaacat ttgagggtga agaggcttcc acgtggacag tgccgcatgt 2520

ttctgtccac tagataacac ctaaataata gttaaaaaac aagaggataa gaatatcaga 2580

aagccagacc ttaaatttct gcaagcaaac atcaaatgaa gtatgcaaaa acgaattgat 2640

agtttaggaa agcatcactc caaagtgttt tattcccgtt ctttttcatt tgctccacaa 2700

gggcatactt cctaaatttc tgcgaacaat tacatctaga tctttttaaa actgaagtat 2760

tttagcatga aaacgcattg ttctgtaatg tggctgtgaa tttcggactg ctcatctgat 2820

ttccctctgg tagaatacat aaataattat acacaacagc atgataatgt gcaaaactaa 2880

gcatcaaaat ctgcacattg tcatgcagaa actaggacag gaggaccagc actttgtcgt 2940

ttgtcctaac caatattaac atagttcagc aacataatct tcagagaccc actagcatga 3000

aggtgtgtta tgtttcctaa agaaataaca tgtaggtagt gatctacaat acctttttg 3060

gggactataa ggtgggaaac catcaacttg aaaaggtttc catttaatca agtaaaaaaa 3120

acagtatttt ttaactatca ataactaaaa ttaaaacaga atagagatat actaacaatg 3180

aaaatcaaac agttgtgcaa attgtattta tcgtagttag tatctcatgt ttctggtgaa 3240

aaaattctct gcccctagaa cttggaagaa gatgcatgaa gtattactcc aaactccaac 3300

actgtgcaac tgatagaaaa gaaacaagac ccttggttgg ctgtctcgga aaaagtggtt 3360

aggtcctttc tgtggccttt tcagttcttt ccacgcatac ccaaccaaaa aagaacacag 3420

atactactca tgtctcacat tctcttttga gcttacactc gaagcaggct tcttgcctct 3480

ataagtagag gctcgtcgta ctctagcaat gctcagtaag cagcccaagc cacttcaaag 3540

ctttgctact accagataga gcattcaccg tgcaatatag aaatacttgc ctctccaacc 3600

atgtctaggt ctgtggagcc tcttattgtt ggtcgtgtca ttggagaagt tctcgatcca 3660

tttaacccat gtgtgaagat ggtagcaacc tataactcaa acaagctggt cttcaatggt 3720

catgagctct acccatcagc agttgtatct aaaccaagag tagaggttca ggggggtgac 3780

ttgcgatcct tattcacatt ggtagaatgc actcgactcg atcttggaac tccatattca 3840

acttcgagta ttgtatgctt gttttcttct ttcgcagtgg ccataattat tcatatttca 3900

ggttatgacg gacccagatg tgccaggacc aagtgatccg tatctgcggg agcatcttca 3960

ctggtaacct ttctcatgca cagtttttc tgctgggtgg ctactaagca cctaaatata 4020

ttagtatatt tttttgaaag gaaaatatat tagtatatgt tgctaaggaa tatagaagta 4080

catcttcttc ttgcacatat atagacagag agactatttt aatagcactt ctaacgagag 4140

tcatttacca ataccttta cacttacaca ggattgtcag taatatacct gggacaacag 4200

atgcttcatt tggtaggtcc ttctctgaga tttgaattgg tatattctat gttctgcatt 4260

ttgaatgaat aaccactgac cttttgaatt gcaggggggg aggtcatgag ctatgagagc 4320

ccaaagccca acattggaat ccacaggttc atttttgtgc tcttcaagca gaagcgaagg 4380

cagactgtat ctgtgccttc cttcagggat catttcaaca cccgccagtt tgctgtggat 4440

aatgatcttg gcctccctgt ggctgctgtt tacttcaatt gtcagagaga gactgctgcc 4500

aggaggcgct gaaaatcgag ttcttggcta tcccagttgt gccaaataaa ggcttttgga 4560

gttatgcacc ttctttctga agtcaatgct cctcttctac attacttcct cgtggaccat 4620

tgcttcttta ctacagtttt tgctcaggga tcaaataaat caagtgcatt ttggagattg 4680

tattagatta tattgtaagc agtgagatca gcaaccatgt gttaacataa gccagtacat 4740

tagcaggtcc atgtttatgg tttcatgttg tgtgtaagca gttatcacta gaaggaaggt 4800

caggtagaca acccaaactg gcaaaaaaaa aagctttatc tactgtatgg cccttgccgg 4860

cttgatgttc catgcacctt ttctgacatg ctgtctactg tatgccaccg ccactataat 4920

gtatgagata tgaatataaa atggagatat ccaaaatatc cagatgattg cccactaaat 4980

gctaaatgta catagtgggt tttccaccta ttttgacttc atcatgtcct tacacaaaat 5040

cagaaaacat ccatttcatg cacattgatg cacactgcat attaacaatc tattcagatt 5100

tggctgtaaa cacaccctta ttttccgcat ccattaatat tatattagta ccctggacag 5160

gttaagcttt tgcagcacag taagtaaccg gatgaaatta caatatgatc ctcgagcgcc 5220

ctat 5224

<210> 3
<211> 173
<212> PRT
<213> Lolium perenne

<400> 3

Met Ser Arg Ser Val Glu Pro Leu Ile Val Gly Arg Val Ile Gly Glu
1 5 10 15

Val Leu Asp Pro Phe Asn Pro Cys Val Lys Met Val Ala Thr Tyr Asn
20 25 30

Ser Asn Lys Leu Val Phe Asn Gly His Glu Leu Tyr Pro Ser Ala Val
35 40 45

Val Ser Lys Pro Arg Val Glu Val Gln Gly Gly Asp Leu Arg Ser Leu
50 55 60

Phe Thr Leu Val Met Thr Asp Pro Asp Val Pro Gly Pro Ser Asp Pro
65 70 75 80

Tyr Leu Arg Glu His Leu His Trp Ile Val Ser Asn Ile Pro Gly Thr
85 90 95

Thr Asp Ala Ser Phe Gly Gly Glu Val Met Ser Tyr Glu Ser Pro Lys
100 105 110

Pro Asn Ile Gly Ile His Arg Phe Ile Phe Val Leu Phe Lys Gln Lys

```
        115                 120                 125

Arg Arg Gln Thr Val Ser Val Pro Ser Phe Arg Asp His Phe Asn Thr
    130                 135                 140

Arg Gln Phe Ala Val Asp Asn Asp Leu Gly Leu Pro Val Ala Ala Val
145                 150                 155                 160

Tyr Phe Asn Cys Gln Arg Glu Thr Ala Ala Arg Arg Arg
                165                 170
```

<210> 4
<211> 177
<212> PRT
<213> Arabidopsis sp.

<400> 4

```
Met Glu Asn Met Gly Thr Arg Val Ile Glu Pro Leu Ile Met Gly Arg
1               5                   10                  15

Val Val Gly Asp Val Leu Asp Phe Phe Thr Pro Thr Thr Lys Met Asn
            20                  25                  30

Val Ser Tyr Asn Lys Lys Gln Val Ser Asn Gly His Glu Leu Phe Pro
        35                  40                  45

Ser Ser Val Ser Ser Lys Pro Arg Val Glu Ile His Gly Gly Asp Leu
    50                  55                  60

Arg Ser Phe Phe Thr Leu Val Met Ile Asp Pro Asp Val Pro Gly Pro
65                  70                  75                  80

Ser Asp Pro Phe Leu Lys Glu His Leu His Trp Ile Val Thr Asn Ile
                85                  90                  95

Pro Gly Thr Thr Asp Ala Thr Phe Gly Lys Glu Val Val Ser Tyr Glu
            100                 105                 110

Leu Pro Arg Pro Ser Ile Gly Ile His Arg Phe Val Phe Val Leu Phe
        115                 120                 125

Arg Gln Lys Gln Arg Arg Val Ile Phe Pro Asn Ile Pro Ser Arg Asp
    130                 135                 140
```

```
His Phe Asn Thr Arg Lys Phe Ala Val Glu Tyr Asp Leu Gly Leu Pro
145                 150                 155                 160

Val Ala Ala Val Phe Phe Asn Ala Gln Arg Glu Thr Ala Ala Arg Lys
                165                 170                 175

Arg
```

<210> 5
<211> 178
<212> PRT
<213> Brassica napus

<400> 5

```
Met Glu Asn Met Gly Thr Arg Val Ile Glu Pro Leu Ile Val Gly Arg
1               5                   10                  15

Val Val Gly Asp Val Leu Asp Asn Phe Thr Pro Thr Ile Lys Met Asn
            20                  25                  30

Val Ser Tyr Asn Lys Lys Gln Val Ser Asn Gly His Glu Leu Phe Pro
        35                  40                  45

Leu Ala Val Ser Ser Lys Pro Arg Val Glu Ile His Asp Gly Asp Leu
    50                  55                  60

Arg Ser Phe Phe Thr Leu Val Met Thr Asp Pro Asp Val Pro Asn Pro
65                  70                  75                  80

Ser Asp Pro Phe Leu Lys Glu Arg Leu His Trp Leu Val Met Asn Ile
                85                  90                  95

Pro Gly Thr Thr Asp Ala Thr Phe Gly Lys Glu Val Val Ser Tyr Glu
            100                 105                 110

Leu Pro Lys Pro Asn Ile Gly Ile His Arg Tyr Val Phe Val Leu Phe
        115                 120                 125

Arg Gln Lys Gln Arg Arg Val Lys Phe Pro Ser Asn Ile Ile Ser Arg
    130                 135                 140

Asp Gln Phe Asn Thr Arg Glu Phe Ala Ile Glu Asn Asp Leu Gly Leu
```

145 150 155 160

Pro Val Ala Ala Val Phe Phe Asn Ala Gln Arg Glu Thr Ala Ser Arg
165 170 175

Arg Arg

<210> 6
<211> 178
<212> PRT
<213> Brassica napus

<400> 6

Met Glu Asn Met Gly Thr Arg Val Ile Glu Pro Leu Ile Val Gly Arg
1 5 10 15

Val Val Gly Asp Val Leu Asp Asn Phe Ala Pro Thr Ile Lys Met Asn
20 25 30

Val Ser Tyr Asn Lys Lys Gln Val Ser Asn Gly His Glu Leu Phe Pro
35 40 45

Leu Ala Val Ser Ser Lys Pro Arg Val Glu Ile His Asp Gly Asp Leu
50 55 60

Arg Ser Phe Phe Thr Leu Val Met Thr Asp Pro Asp Val Pro Asn Pro
65 70 75 80

Ser Asp Pro Phe Leu Lys Glu Arg Leu His Trp Leu Val Met Asn Ile
85 90 95

Pro Gly Thr Thr Asp Ala Thr Phe Gly Lys Glu Val Val Ser Tyr Glu
100 105 110

Leu Pro Lys Pro Asn Ile Gly Ile His Arg Tyr Val Phe Val Leu Phe
115 120 125

Arg Gln Lys Gln Arg Arg Val Lys Phe Pro Ser Asn Ile Ile Ser Arg
130 135 140

Asp Gln Phe Asn Thr Arg Glu Phe Ala Ile Glu Asn Asp Leu Gly Leu
145 150 155 160

```
Pro Val Ala Ala Val Phe Phe Asn Ala Gln Arg Glu Thr Ala Ser Arg
                165                 170                 175

Arg Arg
```

<210> 7
<211> 181
<212> PRT
<213> Antirrhinum sp.

<400> 7

```
Met Ala Ala Lys Val Ser Ser Asp Pro Leu Val Ile Gly Arg Val Ile
1               5                   10                  15

Gly Asp Val Val Asp His Phe Thr Ser Thr Val Lys Met Ser Val Ile
            20                  25                  30

Tyr Asn Ser Asn Asn Ser Ile Lys His Val Tyr Asn Gly His Glu Leu
        35                  40                  45

Phe Pro Ser Ala Val Thr Ser Thr Pro Arg Val Glu Val His Gly Gly
    50                  55                  60

Asp Met Arg Ser Phe Phe Thr Leu Ile Met Thr Asp Pro Asp Val Pro
65                  70                  75                  80

Gly Pro Ser Asp Pro Tyr Leu Arg Glu His Leu His Trp Ile Val Thr
                85                  90                  95

Asp Ile Pro Gly Thr Thr Asp Ser Ser Phe Gly Lys Glu Val Val Ser
            100                 105                 110

Tyr Glu Met Pro Arg Pro Asn Ile Gly Ile His Arg Phe Val Phe Leu
        115                 120                 125

Leu Phe Lys Gln Lys Lys Arg Gly Gln Ala Met Leu Ser Pro Pro Val
    130                 135                 140

Val Cys Arg Asp Gly Phe Asn Thr Arg Lys Phe Thr Gln Glu Asn Glu
145                 150                 155                 160

Leu Gly Leu Pro Val Ala Ala Val Phe Phe Asn Cys Gln Arg Glu Thr
```

```
                165                 170                 175

Ala Ala Arg Arg Arg
            180
```

<210> 8
<211> 175
<212> PRT
<213> Nicotiana tabacum

<400> 8

```
Met Gly Ser Lys Met Ser Asp Pro Leu Val Ile Gly Arg Val Ile Gly
1               5                   10                  15

Glu Val Val Asp Tyr Phe Thr Pro Ser Val Lys Met Ser Val Thr Tyr
            20                  25                  30

Asn Ser Ser Lys His Val Tyr Asn Gly His Glu Leu Phe Pro Ser Ser
        35                  40                  45

Val Thr Ser Lys Pro Arg Val Glu Val His Gly Gly Asp Leu Arg Ser
    50                  55                  60

Phe Phe Thr Met Ile Met Ile Asp Pro Asp Val Pro Gly Pro Ser Asp
65                  70                  75                  80

Pro Tyr Leu Arg Glu His Leu His Trp Ile Val Thr Asp Ile Pro Gly
                85                  90                  95

Thr Thr Asp Cys Ser Phe Gly Lys Glu Ile Val Gly Tyr Glu Met Pro
            100                 105                 110

Arg Pro Asn Ile Gly Ile His Arg Phe Val Phe Leu Leu Phe Lys Gln
        115                 120                 125

Lys Lys Arg Gln Thr Val Leu Thr Ala Pro Leu Ser Arg Asp Arg Phe
```